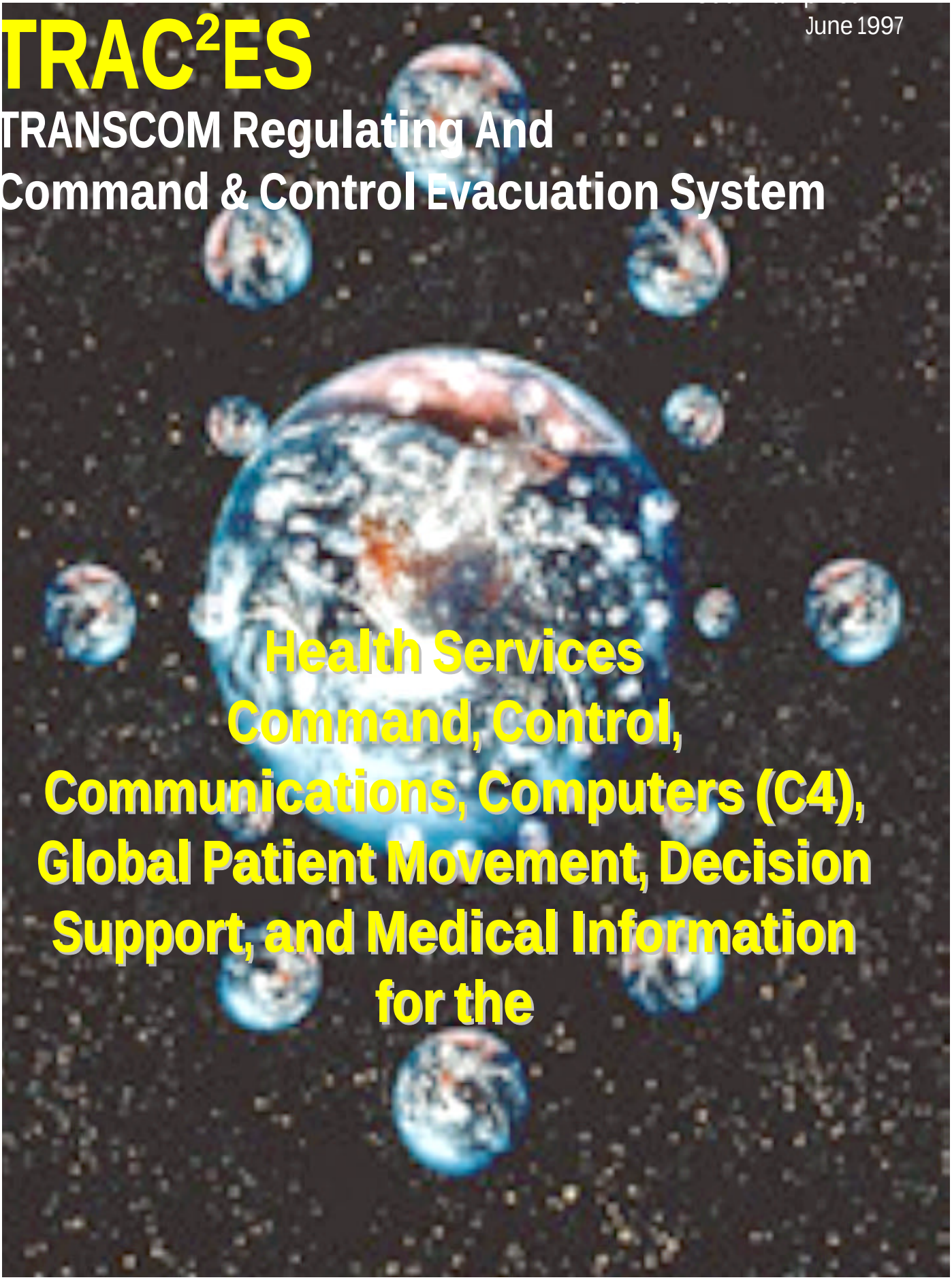
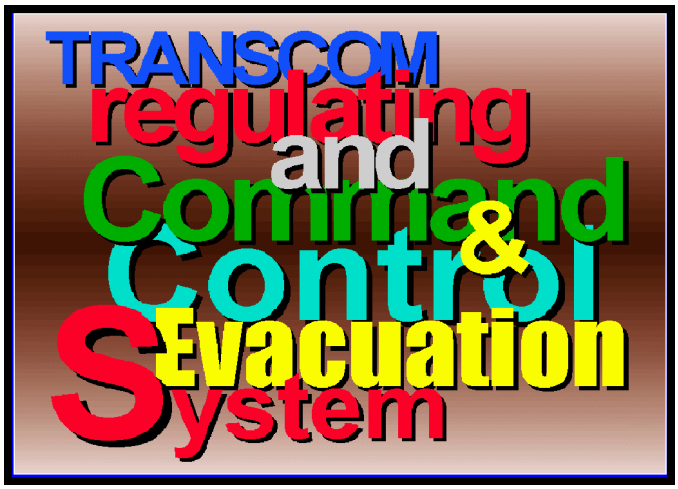
TRAC²ES

June 1997

TRANSCOM Regulating And Command & Control Evacuation System



Health Services Command, Control, Communications, Computers (C4), Global Patient Movement, Decision Support, and Medical Information for the



Defense Transportation System (DTS)

Reengineering the Defense Transportation System, The DTS 2015 Action Plan: "A global information system that integrates traffic management processes and databases in peace and war."

"A single integrated system ..."

US Transportation Command (USTRANSCOM)

DTS 2015 plan: "... is the Department of Defense's (DoD's) Single Manager for common-use strategic transportation ..."

Mission: "... to provide air, land, and sea transportation for the DoD both in time of peace and time of war."

Core business processes: operations planning and execution; doctrine, policy, strategy and strategic planning, and mission support.

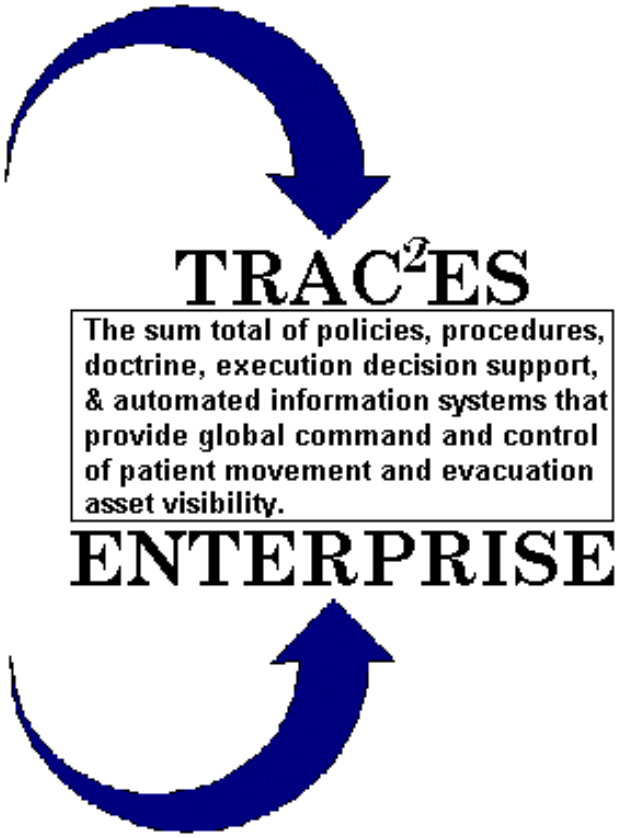
Chairman of the Joint Chiefs of Staff, Joint Vision 2010

"Information technologies will enhance airlift, sealift ... to lighten deployment loads, ... assist pinpoint logistics delivery systems ..."

"We must have information superiority ..."

DoD Medical Readiness Strategic Plan (MRSP) 2001

"An evolutionary course correction."



Executive Summary

TRANSCOM Regulating And Command & Control Evacuation System (TRAC^{2}ES) Enterprise Development and Transition Vision

TRAC^{2}ES is committed to providing global patient movement with total visibility and worldwide responsiveness. TRAC^{2}ES combines transportation, logistics, and clinical decision elements into a seamless patient movement information system capable of assessing and prioritizing requirements, assigning proper resources, and distributing relevant data to efficiently deliver patients.

- As a health care program, the TRAC^{2}ES Enterprise provides the MHSS a patient transportation management and decision support capability during peace, war, and contingency operations worldwide.

- As a transportation program, the TRAC^{2}ES Enterprise provides the Defense Transportation System (DTS) detailed medical functional capabilities specializing in patient origin and destination management. In addition, TRAC^{2}ES provides patient supply, equipment, and medical support asset visibility throughout the continuum of care.

- Viewed across the entire DoD Enterprise, TRAC^{2}ES provides the necessary Doctrine, Policy, Procedures, and Plans (DP^3), Training, Technology, and Business Process Review (BPR) to support the Military Health Services System (MHSS) and DTS. The Automated Information System (AIS) component of the TRAC^{2}ES Enterprise enhances global Command and Control (C^2) and Decision Support capabilities, unifying the parts of the overall global patient movement mission.

The requirement for information dominance in the joint battle space has moved to center stage for modern warfare. TRAC^{2}ES assists with moving medical information onto this stage. The Defense Information Infrastructure (DII) initiative, and the Command, Control, Communications, Computers, and Intelligence For The Warrior (C4IFTW), call for innovative applications of technology that provide the warrior with vital information anywhere at anytime.

As a multi-disciplinary system that utilizes state-of-the-art technology, TRAC^{2}ES combines the functionality of several disparate legacy systems, serving multiple functional domains; provides cost effective decision support; and supports the mission of the warrior.

TRAC^{2}ES provides medical information vital to theater surgeons, planners, and medical controllers, regarding patient resources, transportation, and throughput management enabling key movement decisions before patients are put at risk.

This vital capability maximizes the ability of the DTS to handle global challenges by matching the right capability in time to resolve resource contentions.

Re-engineering the Patient Movement Process

Over a 20-year period DoD collected numerous factual and anecdotal accounts of seriously wounded patients being put at risk by having their care delayed due to disrupted evacuation coordination. The Commander-in-Chief (CINC), United States Transportation Command (USTRANSCOM) resolved to correct this critical problem. The resultant initiative—the TRAC^{2}ES Enterprise—codifies policies, procedures, doctrine, execution decision support, and advanced automated information technologies that permit resource constrained and unconstrained patient movement planning and execution.

- Regulating involves finding a medical treatment facility (MTF), or bed, for a patient.

- Evacuation involves finding transportation, or lift, to get the patient to that MTF.

- From its inception TRAC^{2}ES has involved users in shaping its "to-be model" and has incorporated multi-disciplinary user feedback as part of a comprehensive business process re-engineering effort.

- TRAC^{2}ES won the 1994 National Performance Review Award for Business Process Reengineering Excellence.

- USTRANSCOM sponsored numerous Corporate Information Management workshops, each of which focused on re-engineering a portion of the patient regulating and evacuation process into a seamless whole.

Identified Needs

Re-engineered patient movement business practices identified the following needs:

- Integration of medical regulation bed & evacuation lift for "one-stop shopping."

- Development of a "lift-bed" concept that, because it considers the entire set of lift and bed resources, offers a single, integrated patient movement solution.

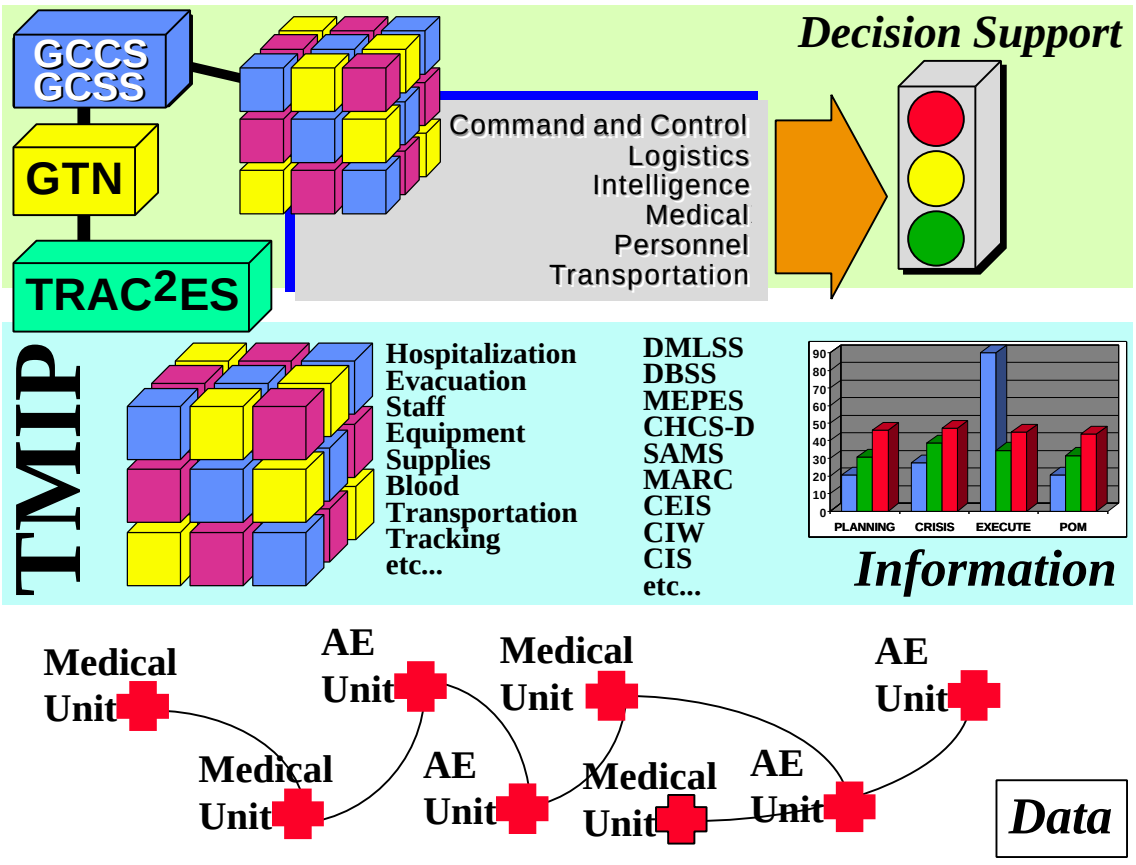
- Ability to identify potential bottlenecks and shortfalls.

- In-Transit Visibility (ITV) support to track an individual patient's status, location, and movement history.

The Integrated Solution

The TRAC^{2}ES AIS will provide a comprehensive decision support tool combining the separate regulation and evacuation processes into a single, seamless function. Additionally, the TRAC^{2}ES AIS will provide a global, distributed, collaborative decision support environment that will include interfaces with appropriate components of the Military Health Services and Defense Transportation System to include the Global Transportation Network (GTN) and subsequently the Global Combat Support System (GCSS) and Global Command & Control System (GCCS)

The Integrated Solution

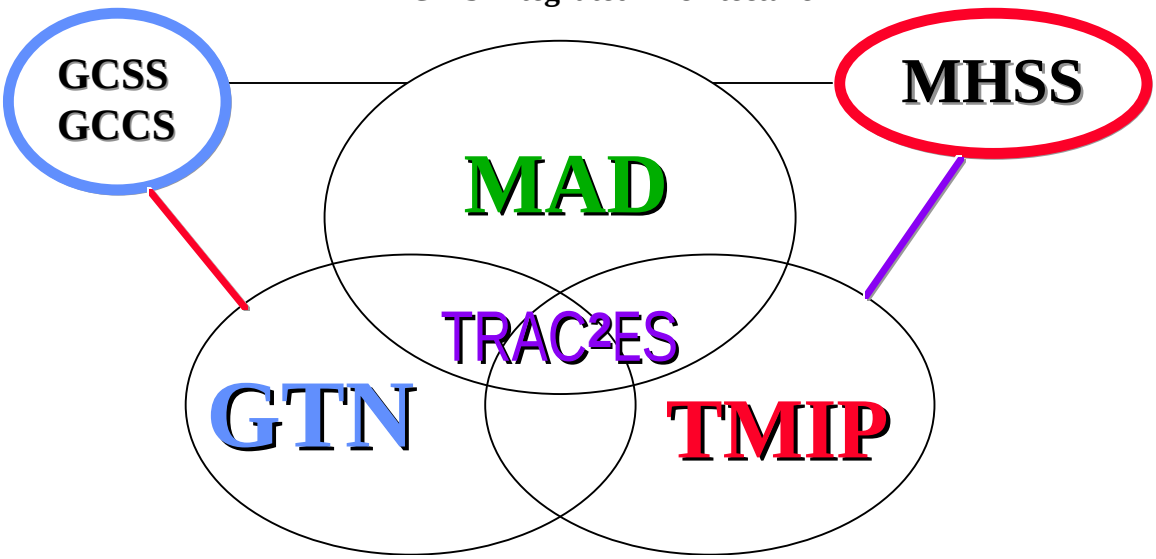


The TRAC^{2}ES Vision:

Managed Patient Movement -- With Total Visibility and Worldwide Responsiveness

C4IFTW Medical Support

TRAC²ES Integrated Architecture



The TRAC²ES Enterprise is a function of the Military Health Services System and is the Patient Movement element within the Theater Medical Information Program (TMIP) family of integrated medical systems supporting the theater commander. TRAC²ES supports global patient movement, medical force structure employment, and theater patient throughput analyses, and:

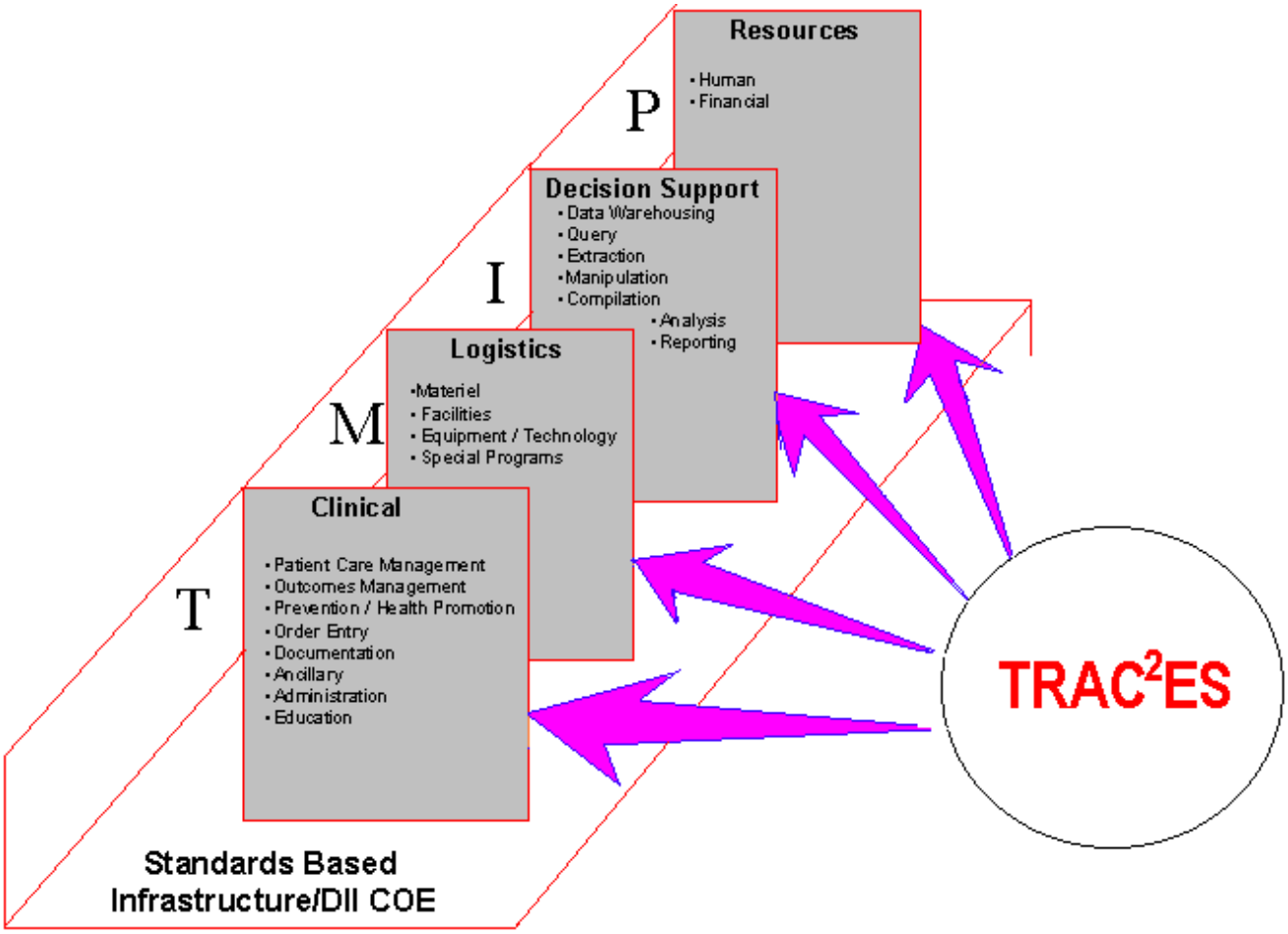
- Provides Command, Control, Communications, Computers, and Intelligence (C4I) support to the warfighting commander(s) for medical information.
- The TRAC²ES Enterprise provides TMIP patient movement command and control and MHSS connectivity enhancing Medical Anchor Desk (MAD) interoperability. From MAD a composite view of medical support to global actions will be possible: TRAC²ES will provide detailed planning capabilities to be accessed by MAD to produce its high level interface for patient movement planning. The TRAC²ES Enterprise element of the global system will provide best case patient airlift requirements and intransit visibility.
- Serves as the TMIP link to the theater Commander-in-Chief.
- Permits seamless systems interface supporting patient needs.
- Supports GCCS/GCSS concept of shared data and joint integration.

Member of the family of integrated medical systems...

TRAC^{2}ES supports TMIP's goal of integrated, seamless automation of the global theater medical environment by providing:

- Identification and delivery of swift aeromedical evacuation of casualties.
- Alternatives for time-sensitive decisions critical to success of theater medical operations.
- Integration of medical information under a joint concept of operations

Business Area Support



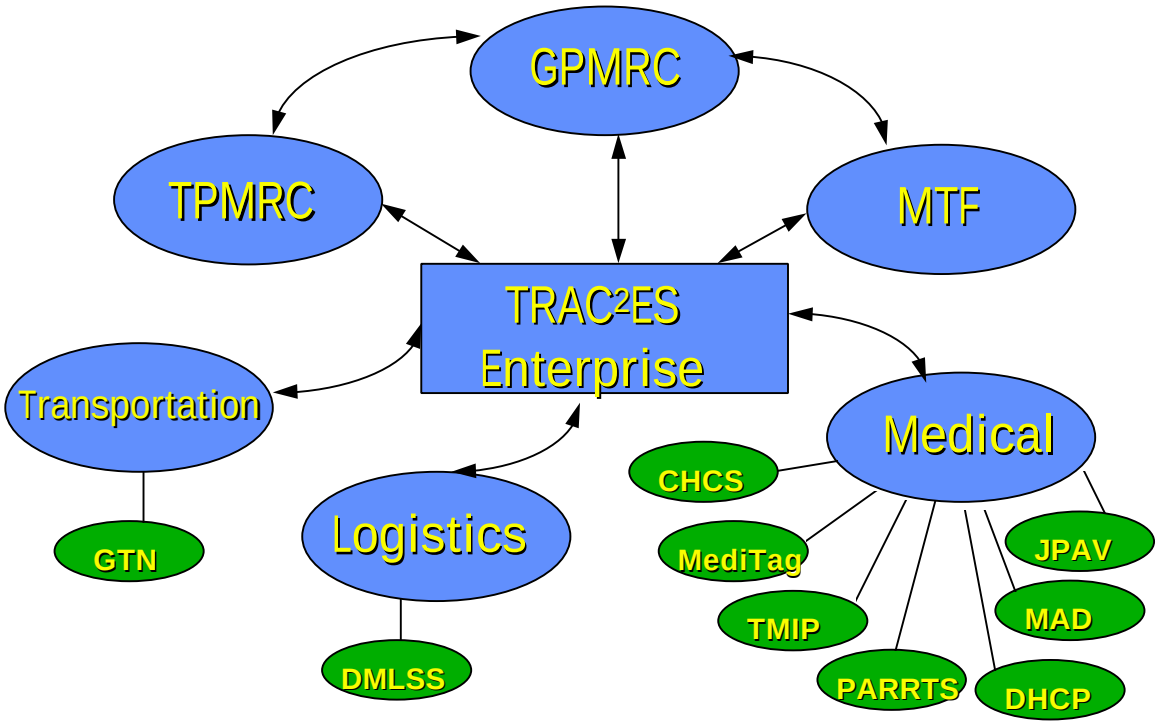
TRAC²ES Interfaces/Networks

The interface between TRAC²ES and most data sources will be implemented under a client-server architecture with TRAC²ES acting as a client component. The TRAC²ES infrastructure will facilitate rapid information sharing, both internally and externally to interfaced systems. TRAC²ES developers will remain aware that the cumulative burden of information sharing on the larger MHSS and GTN systems could reduce total system performance for everyone on those systems. They actively work to constrain the bandwidth required for TRAC²ES' operation in order to reduce the size of the communications pipe required for information to flow throughout the larger systems.

Patient movement requests (PMRs) and advance PMRs (APMRs); lift/bed updated patient, transportation and clinical information will be sent via available communication links. A layer of communication service messages will normally be included to ensure reliability. Persistent error conditions will normally cause messages to be sent automatically to system administrators.

The to-be model of TRAC²ES includes multiple components as shown in the figure below:

Components and Information Flows



TRAC^{2}ES Interfaces/Networks Goals

- Isolate and complete manual feeds from legacy transportation systems to avoid redundant data entry.
- Move limited automated interface to GTN prototype into GTN design architecture.
- Add to existing medical systems interfaces (e.g., Defense Medical Regulating Information System (DMRIS), Composite Health Care System (CHCS)-OffBoard Server): TMIP prototype, DoD-sponsored Portable Information Carried for echelon 1 and 2 feeds.
- Implement In-Transit Visibility on TRAC^{2}ES Patient Tracking World Wide Web site.
- Consolidate the management of point to point theater regulating between CINC & GPMRC.
- Complete wireless local area network and high frequency communications interfaces.
- Produce, test, and maintain live Total Asset Visibility, Joint Personnel Asset Visibility - TRAC^{2}ES connectivity to support medical, personnel, mortuary, casualty, and logistics **hand-offs.**
- Recognize developing capabilities of feeder/source systems.
- Export TRAC^{2}ES as far forward as communications infrastructure permits to enable seamless evacuation management.
- Complete TRAC^{2}ES/GTN migration systems interface (e.g. C2IPS/ADANS/ GDSS-GTN- TRAC^{2}ES data transfer) .
- Complete Gap Analysis with medical, personnel, and logistics planning and modeling systems.
- Identify, prototype, and develop interface with Defense Medical Logistics Standard Support (DMLSS) patient movement item tracking capabilities.
- Expand theater planning functionality to accommodate multiple theaters inter- and intra-theater movements.
- Provide interface with C4IFTW deliberate planning, crisis action planning, and course of action analysis/modeling systems; and transparent interoperability with GCCS functional anchor desks.

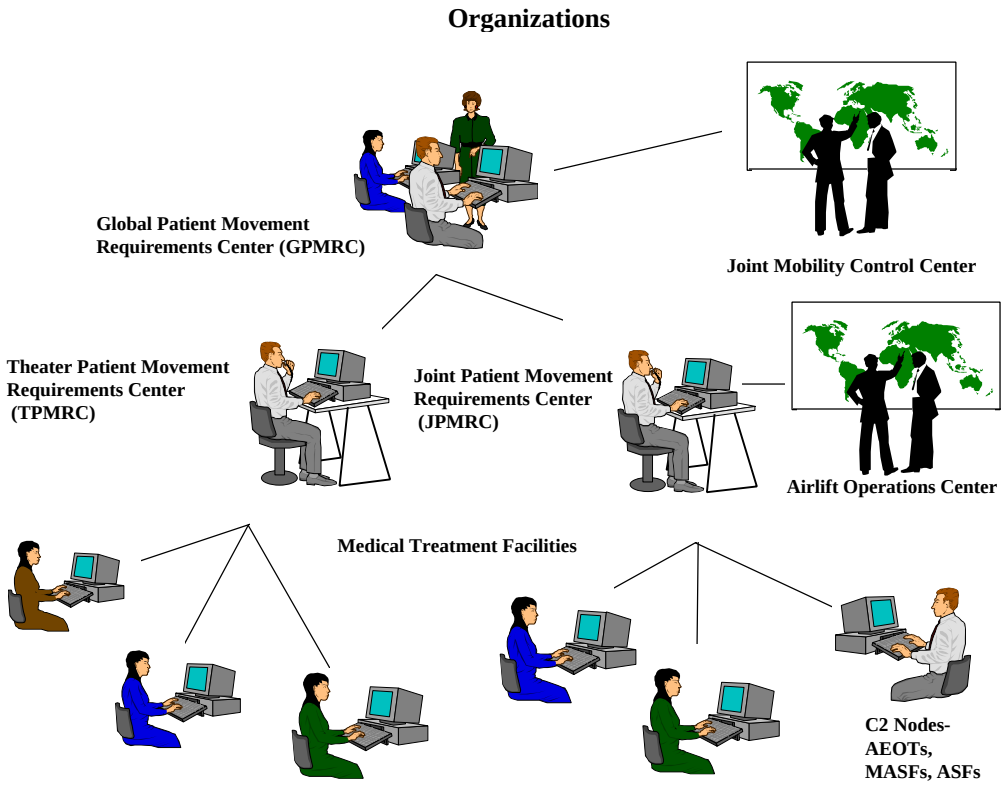
TRAC^{2}ES Enterprise
Components and Information Flows

GPMRC ——— **Movement Plans, Schedules, Actual Lift**
TPMRC ——— **Movement Plans, Schedules, Actual Lift**
MTF ——— **APMR/PMR Bed Status & Availability**
GTN ——— **Airfield/Mission & Patient Movement Data**
GDSS ——— **Aircraft Requests, Schedules, Manifests**
CASS ——— **Mission/Mission Crew Availability**
C2IPS ——— **Schedule changes Event Confirmation**
JOPES ——— **Notional Patient Requests based on force structure laydown, casualty rates, and**
MAD ——— **medical capability; Transportation Availability;**
TMIP ——— **MTF and Medical Infrastructure Course of Action Analysis**
TAMMIS
DHCP ——— **Patient/Bed Data**
CHCS
PARRTS ——— **Patient/Bed Data**
MEDITAG ——— **Patient Data**

TRAC^{2}ES Enterprise Organization

TRAC^{2}ES meets the patient movement business practice needs identified by business process re-engineering:

- Global Patient Movement Requirements Center (GPMRC)
- Theater/Joint Patient Movement Requirements Centers (TPMRCs/JPMRCs)
- Medical Treatment Facilities (MTFs)
- Aeromedical Evacuation (AE) elements



Data about opportune and dedicated lift is stored in the database server at the GPMRC.

Each TPMRC database server stores information about its patients, MTFs, airfields and available beds.

All data in the distributed network can be accessed from each node.

Note: JPMRC provides the same functionality as a TPMRC for a Joint Task Force.

TRAC²ES Enterprise Organization *continued*

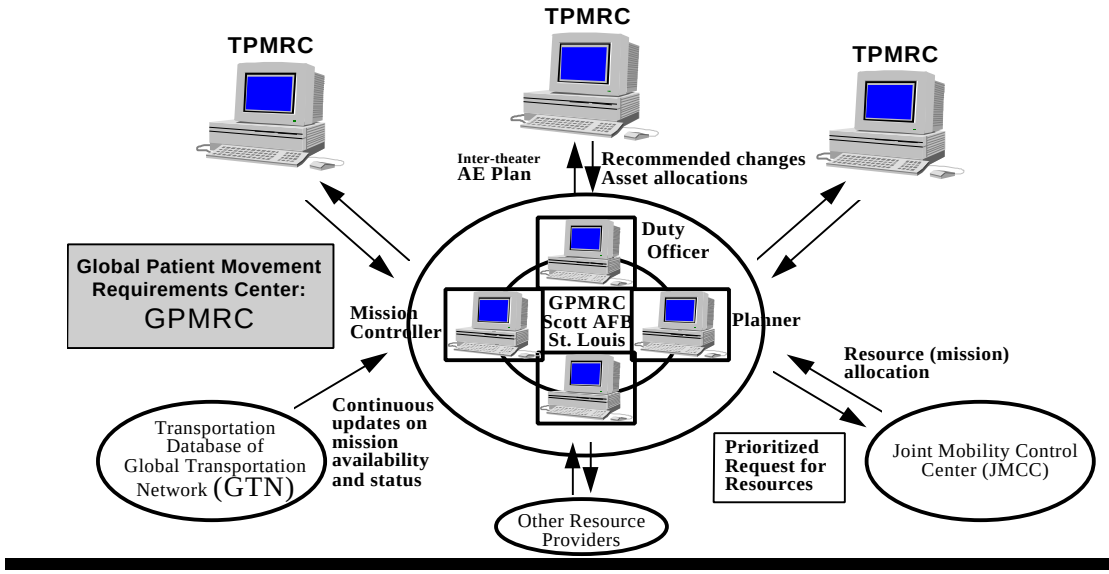
GPMRC

Located at Scott Air Force Base, Illinois, the GPMRC monitors worldwide patient movements.

Reporting to USTRANSCOM, it assumes the responsibilities previously performed by the Armed Services Medical Regulating Office (ASMRO) and the Aeromedical Evacuation Coordination Center (AECC).

As the centralized coordinator supporting TPMRCs, the GPMRC functions as a one-stop shop by:

- Providing management oversight and global visibility of the separate *intertheater* activities underway in geographically separated TPMRCs and *intra-CONUS* patient movement activities.
- Coordinating and allocating bed and lift assets across all TPMRCs.
- Integrating and deconflicting supported TPMRC plans and schedules.
- Communicating lift and bed requirements distributively.
- Supporting TPMRCs with a dynamically updated worldwide distributed database



Process Flow Overview

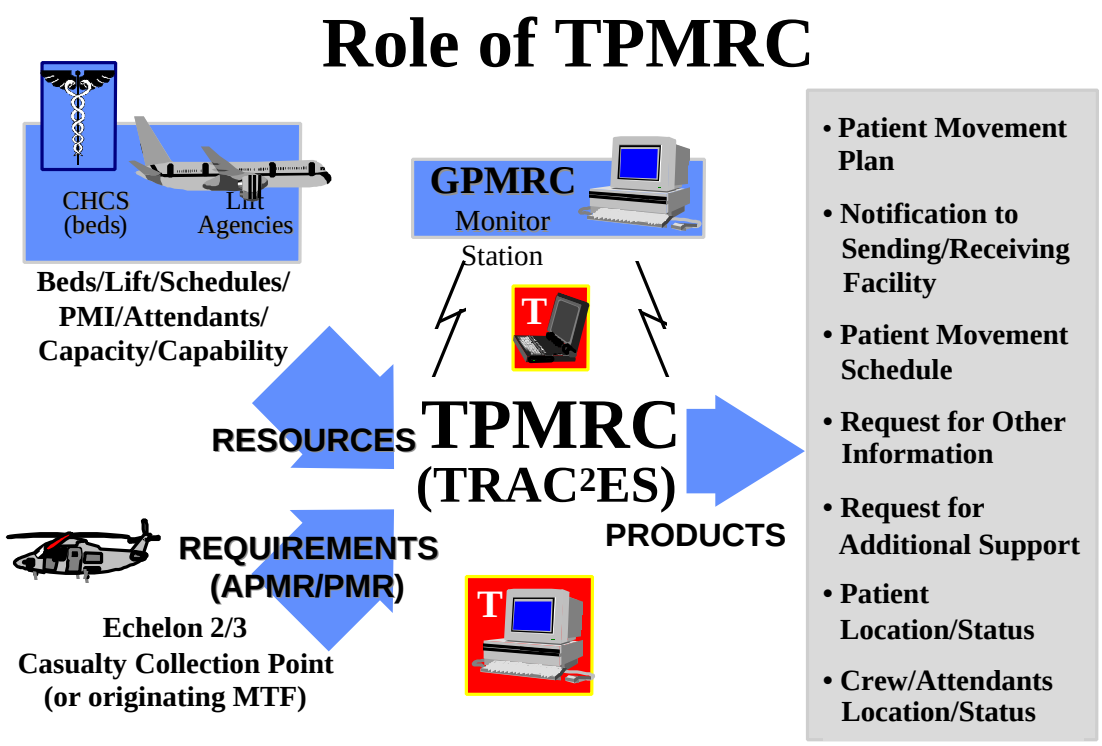
How TRAC²ES benefits GPMRC:

- Extracts and presents data. Data is extracted from interfaced databases and then presented in an easy-to-use format.
- Maximizes data relevance and minimizes data latency. The most up-to-date and relevant data regarding assets and asset contention is made available.
- Serves as single point of contact for lift providers. All TPMRC requests are integrated before being communicated to the Mobility Control Center (MCC).
- Provides tools for real-time worldwide monitoring of Aeromedical Evacuation execution, asset status, and patient ITV.
- Enables fast, flexible, and accurate reactive replanning. The GPMRC is alerted about unplanned worldwide events.

TPMRC

TPMRCs control and monitor theater-wide patient movements. Each TPMRC will report to its theater's Commander in Chief, through the Command Surgeon, and assume the responsibilities previously performed by the Joint Medical Regulating Offices (JMROs) as well as some of the tasks of the theater Aeromedical Evacuation Coordination Center (AECC).

A TPMRC receives PMRs from its MTFs and bed and lift allocations from the GPMRC to create its patient movement plans. Collaboration with the GPMRC will be done with available communication links.



How TRAC²ES benefits TPMRCs:

- Coordinates and plans bed and lift assignments for all patients across all theater MTFs.
- Provides tools for real time monitoring of theater-related AE execution, asset status, and ITV.
- Allows users to modify plans and to perform what-if evaluations.

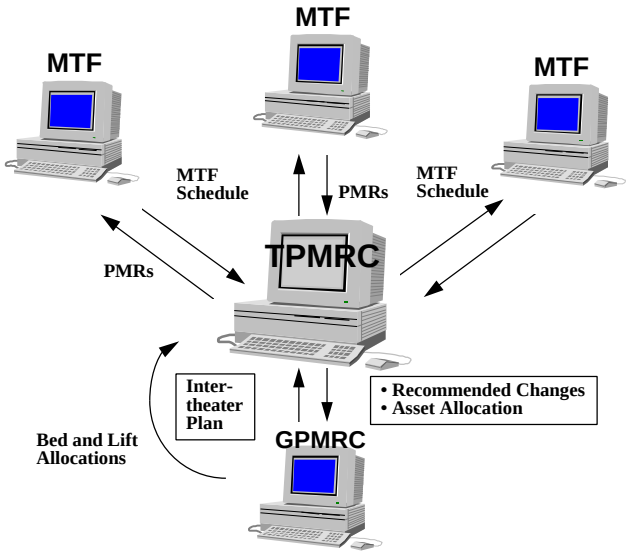
TRAC²ES Enterprise Organization *continued*

MTFs

MTFs begin the TRAC²ES patient movement process. Connected to TPMRCs, MTFs provide the TPMRC with PMRs and bed availability data.

How TRAC²ES benefits MTFs:

- Eliminates redundant data entry by allowing TRAC²ES' software to use patient information already entered into the existing Composite Health Care System (CHCS).
- Helps theaters to predict resource allocation further into the future by automatically sending APMRs to the TPMRC when a patient is first admitted to the MTF.
- Enables users to quickly select missing patient information (such as ICD-9 codes) from pick lists.
- Provides timely bed availability updates to assist hospital management and



executive decision making.

MTF Information Processing

- Allows AE clerks to view incoming and outgoing mission details.
- Provides ITV for individual patient schedules.
- Maintains information flow: if CHCS goes down; PMRs, and APMRs can still be sent to the TPMRC using a personal computer with modem capability.
- Permits peacetime cost-based analysis for most efficient provision of care beyond the capabilities of local MTFs.

Technologies for Entering and Manifesting (TEAM)

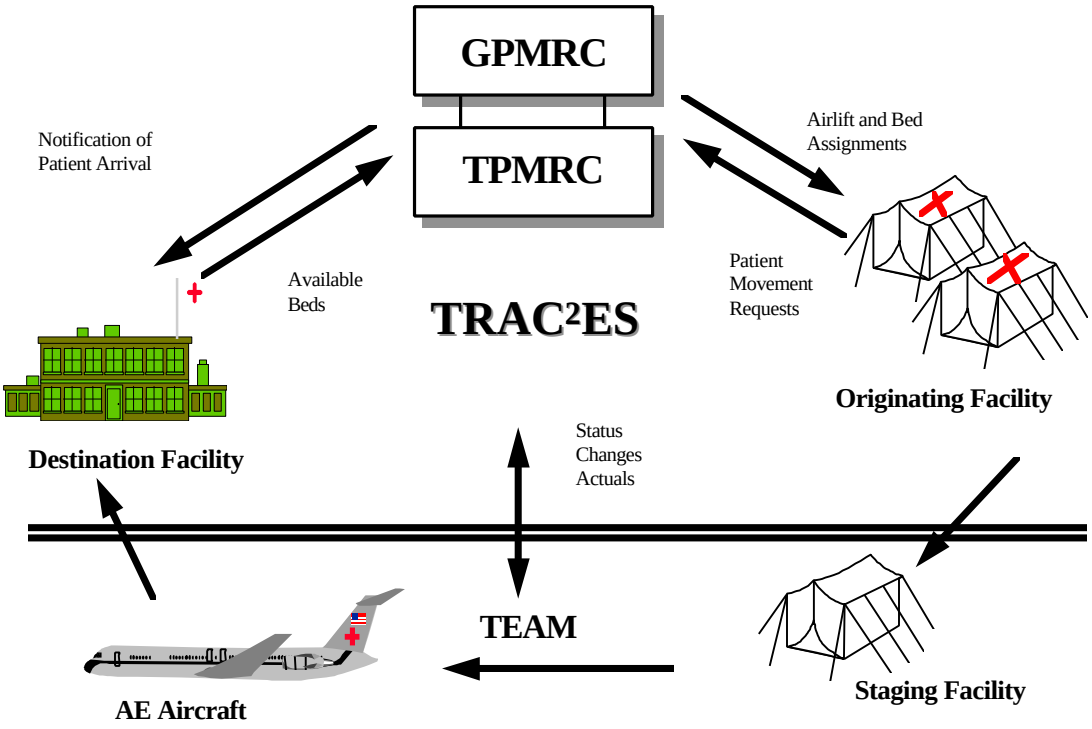
The mobile AE operating environment introduces a new set of automation requirements that are being developed under the TEAM project. Automated interfaces to TRAC²ES will enhance patient data reporting capabilities, enhancing in-transit visibility. The development of an electronic patient evacuation record, which is transferred with patients as they are moved, will provide, for the first time, a treatment documentation continuum.

TEAM is a database management tool for care providers that is used to track both clinical and administrative data during the patient evacuation process.

TEAM will be used in AE staging facilities and in AE aircraft.

- TEAM software is used to record patient and aircraft mission information using a familiar interface based on existing paper forms. Basic functions are provided to create records, edit data fields and print forms.
- ITV reporting is performed using SmartCard technology, barcode key input, or manual check-off from a preplanned list.
- Interfaces to TRAC²ES are implemented via Simple Mail Transfer Protocol (SMTP) electronic mail services. Preplanned mission data is received from TRAC²ES using an electronic mail package and transferred to TEAM.
- ITV messages generated by TEAM are sent directly to TRAC²ES using a preconfigured address.

TEAM Information Processing



World Wide Web Technology

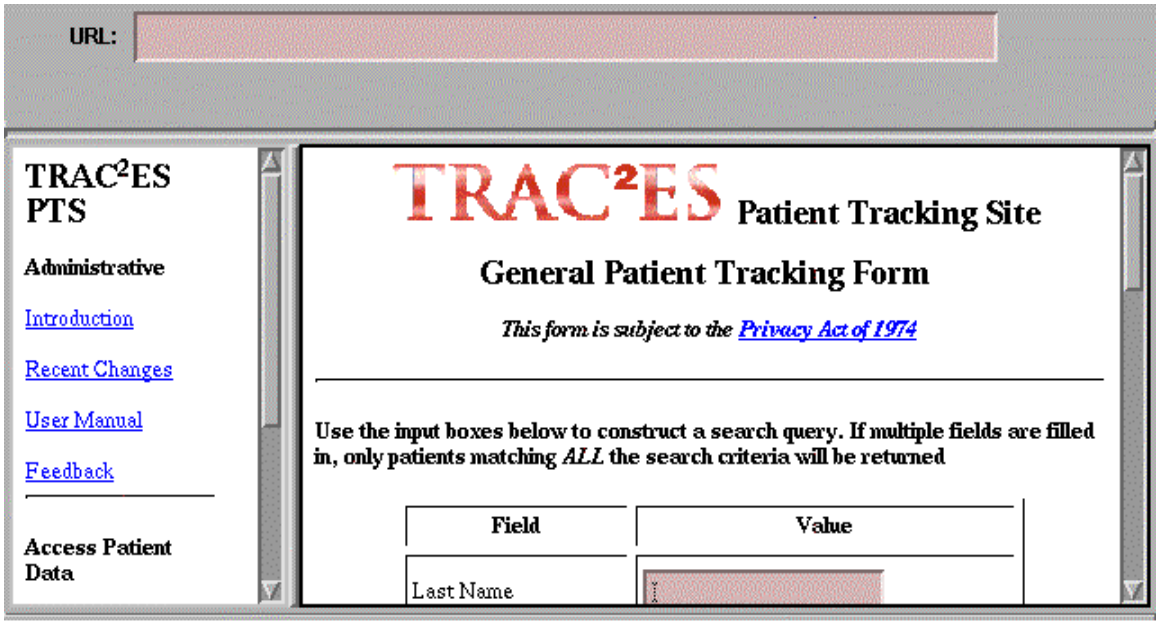
TRAC^{2}ES is accessible to users by readily available means including use of the Internet, interfaces with other systems, and TEAM.

World Wide Web (WWW) technology is employed in two ways:

- at the MTF level of operations, allowing entry of Patient/PMRs/ clinical data
  - -- add and view Patient ITV data
  - -- view itineraries
  - -- view mission manifests

- by the Patient Tracking Site - providing in-transit visibility to authorized users

https://trac2eswww.safb.af.mil



Patient Tracking on the Web

Benefits of Web-based Technology:

- Easy to use.
- Significantly reduces the need for technical support at the MTFs and Aeromedical Staging Facilities (ASFs).
- Reduces the bandwidth requirements between the MTFs and TPMRC.
- Reduces the reliance on specialized MTF hardware.

Overview of TRAC^{2}ES Operational Support Modes

TRAC^{2}ES will accommodate three seamless modes of operation: Planning, Forecasting, and Reactive Replanning.

For the first time within the same decision support environment, the staff officer preparing next year's operations plans is linked with the C^2 controller trying to quickly recover from a mission canceled due to aircraft maintenance problems.

Reactive replanning

- Deals with actual patient movement.
- Supports today's and tomorrow's operations.
- Based on actual resources and requirements.
- Makes use of TRAC^{2}ES' capability to patch the plan as disruptions occur.

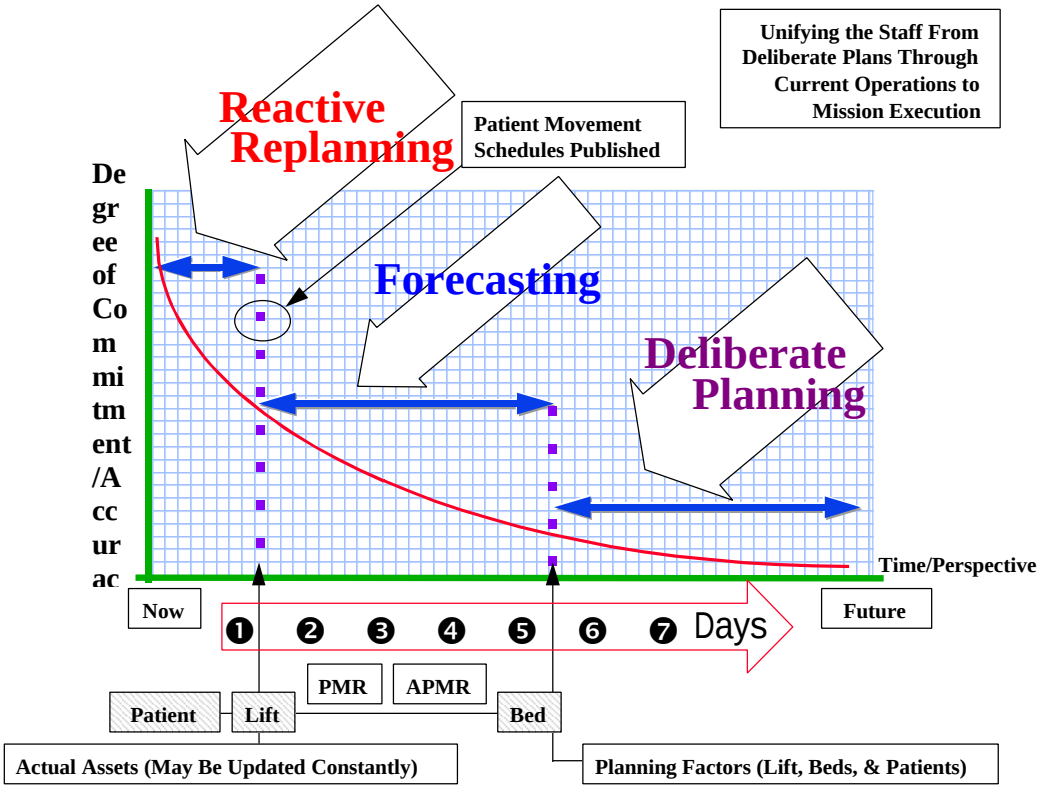
Forecasting

- The zone between notional data and actual data.
- Time horizon applicable to patient management situation.
- Identifies potential evacuees.
- Uses actual bed data.
- Plans advanced patient movement.
- Generates tentative patient schedules.
- Looks at actual lift schedules and identifies opportune missions.
- Identifies lift needs and makes forecasts available to transportation operations planners.
- Deals with the reality that limited bed and lift assets place constraints on the movement plans.

Deliberate planning

- Primarily requirements-based notional future operations.
- Includes deliberate and crisis action planning.
- Characterized by the use of notional planning factors for lift, beds, and patient numbers and ailments.
- Goal is to determine resources needed to meet the movement requirements for a notional patient stream.

The Sliding Scale of Commitment



Degree of Commitment:

TRAC^{2}ES supports iterative planning to determine the best allocation of resources. In a constrained environment, as resources change and new patients are entered, the recommended plan will be different from the plan which is currently being executed.

- The TRAC^{2}ES algorithm recognizes that changing an existing plan may have costs associated with changing a patient's routing. The algorithm expresses a higher commitment to an existing patient itinerary that contains the original mission segment, original destination MTF, and/or uses the original destination airfield.
- Highest commitment is to patients moving or those who are about to be moved.

Commitment to decisions made in the existing plan decreases the further out in time a patient's ready date is set.

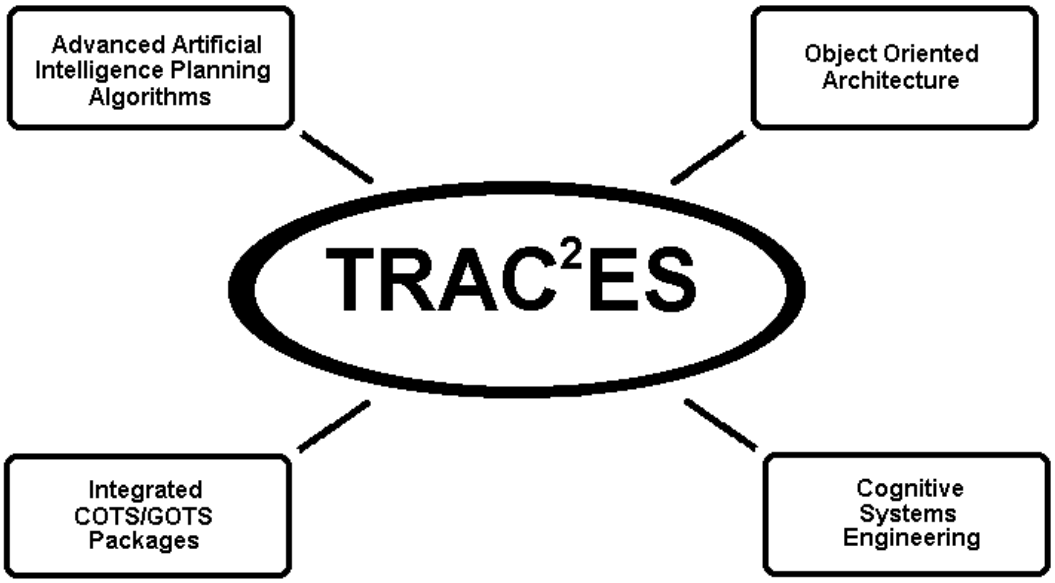
The accuracy and degree of commitment to patient movement increases dramatically at two points: during forecasting, when the patient is declared ready to move; and again during reactive replanning when actual lift is allocated. Across the continuum of operation, TRAC^{2}ES' users will constantly change and update information in response to real-world events.

TRAC²ES Automated Information System

Development Technology

TRAC²ES uses state-of-the-art advanced decision support technology and software design methodologies and features:

- object-oriented architecture
- client-server environment
- C++ programming language



TRAC²ES is designed with a distributed object-oriented architecture. It operates in a client-server environment while processing is distributed across all of the TRAC²ES architectural components.

An object-oriented database architecture was chosen for its ability to process large volumes of information quickly, which is essential to the execution of the planning algorithm. A commercial off-the-shelf (COTS), object-oriented database (OODB) management product is at the core of the application. This OODB can also be queried using Structured Query Language (SQL) and allows application software to access other databases. The TRAC²ES database library isolates TRAC²ES' application code (graphical user interface, interfaces to external systems, planning algorithm, etc.) from the OODB implementation. A cognitive systems engineering approach was utilized to design graphical user interfaces (GUI) based on user requirements. Government off-the-shelf (GOTS) tools, such as Mapping Analysis Tool for Transportation (MATT), are also in use for graphical depictions of map displays.

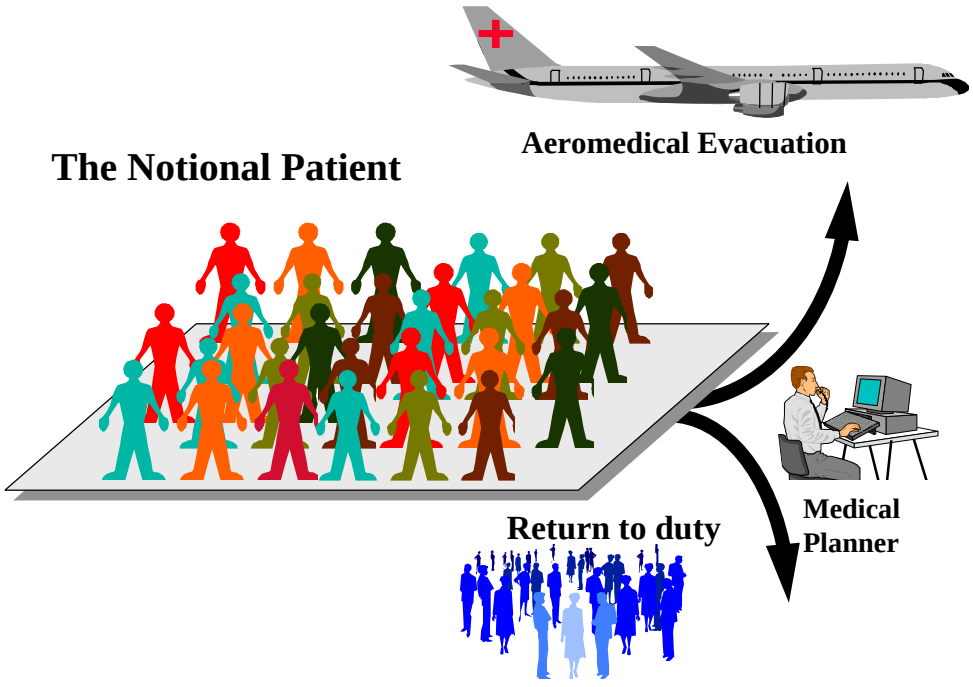
Development Technology *continued*

Cognitive Engineering
Cognitive engineering principles give TRAC^{2}ES the decision-support power to solve the complex regulation and evacuation puzzle and to provide the user with exactly the information needed in the right form and at the right point in the decision making process.

The Notional Patient
In nearly every conflict, or natural disaster, there are human casualties. How many casualties, what kind of injuries, and what resources are required are often unknowns due to the fog of war.

To help medical planners deal with these unknowns, they will be able to call upon a host of notional patients to act as placeholder casualties, thus allowing planners to more accurately prepare for real casualties. TRAC^{2}ES will create notional patients with any type of injury, in whatever quantity the planners desire to fit the current or projected situation.

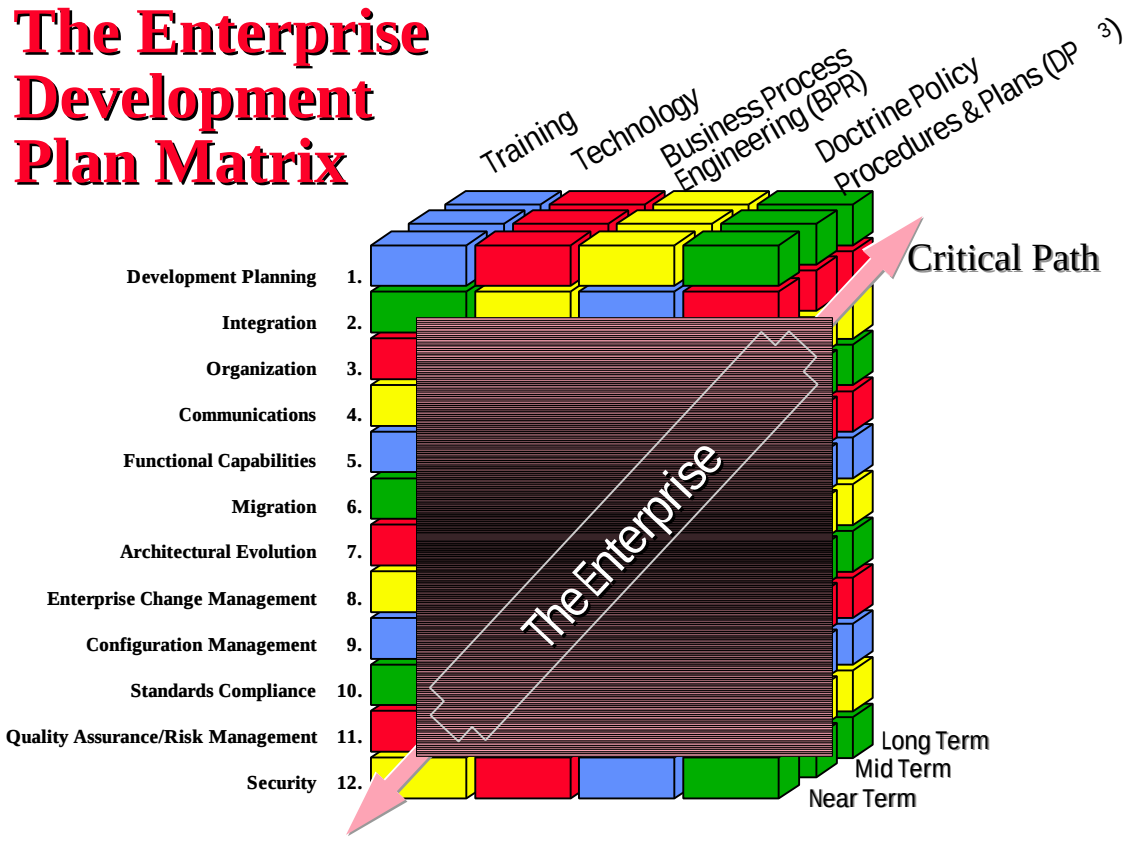
Using the notional concept, decision makers can begin early planning to foresee potential bottlenecks and shortfalls before they occur.



TRAC²ES Enterprise Development

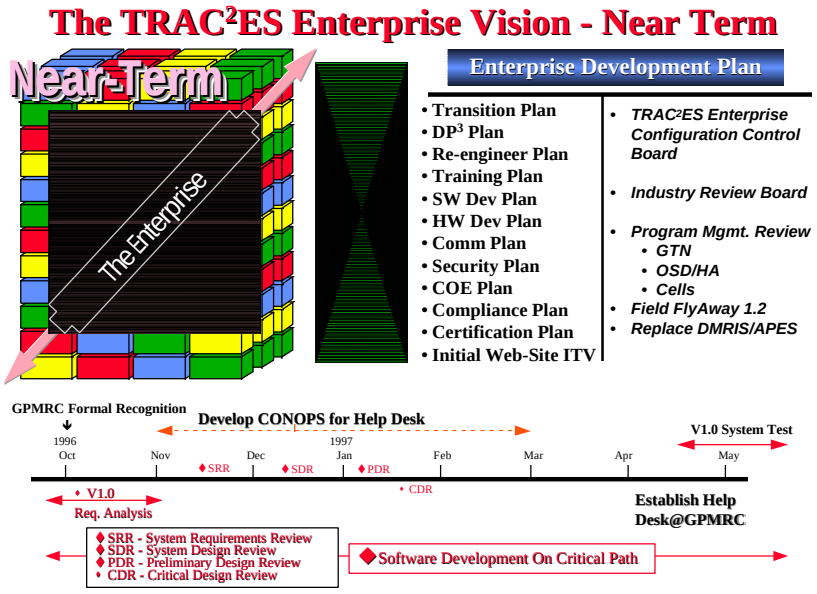
Management of the TRAC²ES Enterprise is guided by the Enterprise Development Plan, a tool identifying the near, mid, and long-range tasks under each of the four competencies:

- Doctrine, policy, procedures, and plans.
- Business processes.
- Technology including the software, hardware, and communications.
- Training to insure the user can competently operate all system functionalities, and be capable of communicating ongoing development needs.



Enterprise Development Plan:

- Specifies the primary competencies of the project.
- Links near term, mid term, and long term actions.
- Matches development, resources, and functionality.
- Provides key timeframes for critical DoD information system interfaces, other system support requirements, and performance.

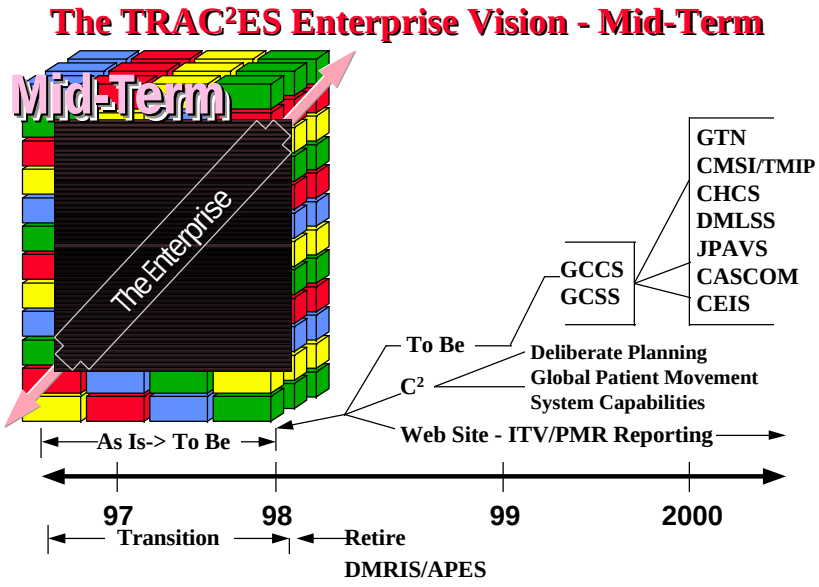


Transition Plan:

- Details US European Command, US Pacific Command, and CONUS actions.
- Provides time line of action and coordination.
- Develops Transition Team actions to map business processes, engage competencies, and determine course of action.

Integration efforts:

- CHCS interface refinement.
- GTN component system information interface (e.g. GDSS, ADANS, CMARPS, C²IPS).
- Incorporate other essential interfaces.
  - Joint Personnel Asset Visibility System
  - Defense Medical Logistics Support System
  - Corporate Executive Information System
  - Combat Medical Support Infomatics
  - Corps Support Command

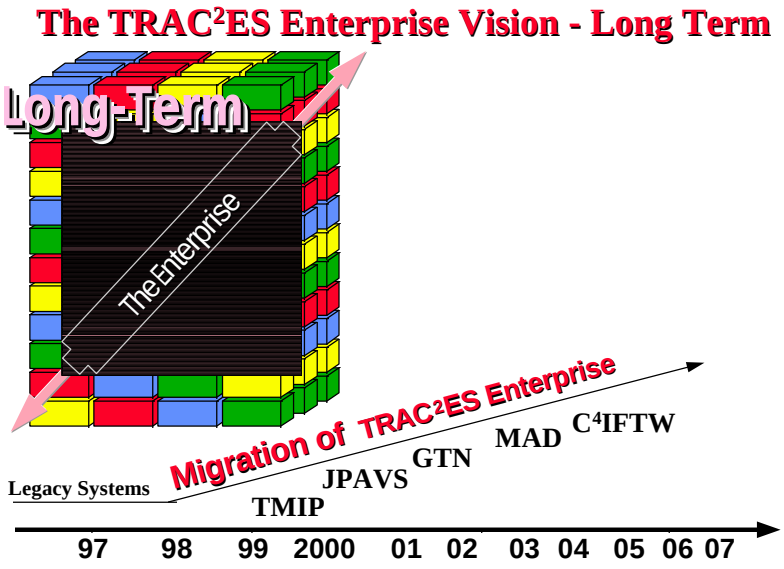


Additional efforts:

- Use web site technology in place of other systems architecture/interface development.
- Define and incorporate updated DP³, training and Business Process Re-engineering into joint and Service doctrine, joint exercises, and formalized training.
- Pursue exporting TRAC²ES for component operations to support DoD standardization and Common Operating Environment (COE).
- Re-engineer business process to permit integrated patient movement management activities consistent with Service component execution responsibilities.

TRAC²ES Progress to Date

- Providing TRAC²ES Enterprise functionality for transition from legacy systems to a DoD COE compliant, integrated system for the global patient movement system.
- Establishing operational prototypes in USEUCOM and USPACOM Joint Medical Regulating Offices to gain user feedback.
- Supporting Joint Chiefs of Staff exercises by providing patient movement management support.
- Embracing techniques and technology to enhance development while maximizing use of resources and minimizing costs.
- Employing Health Level Seven (HL7) protocol to transmit information seamlessly between standard medical systems.
- Leveraging the DoD information infrastructure development for technology, capabilities, and communications support.
- Maintaining continual momentum for TRAC²ES Enterprise development.
- Creating a linkage between every day competencies and subject matter areas critical to the evolution of the TRAC²ES Enterprise for near-, mid- and long-range forecasts through the Enterprise Development Plan.
- Establishing a linkage for unified commands, TRANSCOM Command Surgeon (TCSG), and key subject matter area experts through TRAC²ES Transition Planning and Transition Teams.



Summary

The TRAC^{2}ES Enterprise will provide GTN and TMIP patient movement command and control and MHSS connectivity for patient movement operations. The TRAC^{2}ES Enterprise element of this global system will provide best case patient airlift requirements and in-transit visibility.

Bringing necessary TRAC^{2}ES information to unified commanders will significantly improve the Joint Task Force (JTF) and CINC decision support and resource management capabilities as well as enable the JTF commander to make patient movement recommendations based on decision support tools.

In addition, the evacuation planning course of action analysis capability projected for TRAC^{2}ES will be used in concert with other tools by medical and other planners to forecast requirements and enhance reactive replanning crisis action and deliberate planning concept development.

A fully adopted TRAC^{2}ES Enterprise promotes effective use of personnel and resources with efficient use of bed and lift capabilities. Implementation of the TRAC^{2}ES Enterprise vision significantly enhances the daily operations information database supporting global patient movement. With this information accessible, the management of each additional patient move benefits from the collective experience and accumulated information from all past patient movements.

Moreover, the system provides the ability to research past itineraries, costs, and other related information to assist with business case analysis. The ability of TRAC^{2}ES to perform what-if analyses and conduct assured reactive replanning sessions pays dividends well beyond its primary mission of ensuring each patient is moved expeditiously and cost effectively to a definitive care destination.

The TRAC^{2}ES Enterprise

- **Facilitating Doctrine, Policies, Procedures, Planning**
- **Leveraging Emerging Technologies**
- **Promoting Process Improvement and Process Development**
- **Automating Joint Training**

Integrated, synchronized, leading edge, comprehensive, seamless, flexible

-- a paragon in business process re-engineering for DoD Global Patient Movement

Brig Gen John G. Jernigan, Command Surgeon, USTRANSCOM

Glossary

ADANS - Air Mobility Command Deployment Analysis System

AE - Aeromedical Evacuation

AECC - Aeromedical Evacuation Coordination Center

AEOT - Aeromedical Evacuation Operations Team

ASF - Aeromedical Staging Facility

ASMRO - Armed Services Medical Regulating Office

C^2IPS - Command & Control Information Processing System

CASS - Consolidated Aircrew Scheduling System

CHCS - Composite Health Care System

CJCS - Chairman, Joint Chiefs of Staff

CMARPS - Combined Mating And Ranging Planning System

CMSI - Combat Medical Support Infomatics

DHCP - Distributed Health Care Program

DMLSS - Defense Medical Logistics Standard Support

DMRIS - Defense Medical Regulating Information System

DP^3 - Doctrine, Policy, Procedures, & Plans

DTS - Defense Transportation System

GCCS - Global Command & Control System

GCSS - Global Combat Support System

GDSS - Global Decision Support System

GPMRC - Global Patient Movement Requirements Center

GTN - Global Transportation Network

GUI - Graphical User Interface

HL7 - Health Level Seven

ICD-9 - International Classification of Diseases, 9th revision

ITV - In-Transit Visibility

JMRO - Joint Medical Regulating Office

JPAVS - Joint Personnel Asset Visibility System

JPMRC - Joint Patient Movement Requirements Center

MAD - Medical Anchor Desk

MASF - Mobile Air Staging Facility

MATT - Mapping Analysis Tool for Transportation

MCC - Mobility Control Center

MHSS - Military Health Services System

MTF - Medical Treatment Facility

OODB - Object-Oriented Data-Base

PARRTS - Patient Accounting Reporting and Realtime Tracking System

PMR - Patient Movement Request

SMTP - Simple Mail Transfer Protocol

SQL - Structured Query Language

TAMMIS - Theater Army Medical Management Information System

TCSG - TRANSCOM (Command) Surgeon

TEAM - Technologies for Entry And Manifesting

TMIP - Theater Medical Information Program

TPMRC - Theater Patient Movement Requirements Center

TRAC^{2}ES - TRANSCOM Regulating And Command & Control Evacuation System

USEUCOM - United States European Command

USPACOM - United States Pacific Command

USTRANSCOM - United States Transportation Command

Notes